

from which we learn that it contains 4350 botanical works. It is greatly to be hoped that an arranged and descriptive catalogue of this library will be prepared and given to the public. We know of few works which would be of greater service to botanists.

A copious index concludes the volume. The whole evinces in every part the hand of a master, and does its author the greatest credit. It only requires to be known to find its way into the hands of all botanists.

*Classification der Säugethiere und Vögel.* Von J. J. Kaup. Pp. 144. 8vo. Darmstadt, 1844.

In this work the author endeavours to arrange the Mammalia and Birds, and elaborates them into a quinary system, resembling in structure but differing in detail from the quinary systems which flourished for a time in this country. Like the British quinarys, Dr. Kaup insists on a uniformity and constancy in the analogies between corresponding groups, while he follows Oken in extending these analogies to the anatomical systems of organization which are more or less developed in each animal according as it represents one set of organs or another. Thus he makes his first subkingdom to consist of—1. Mollusca, or *generation-animals*; 2. Fish, or *muscle-animals*; 3. Amphibia, or *bone-animals*; 4. Birds, or *lung-animals*; 5. Mammalia, or *sense-animals*. He then proceeds to ring the changes on these anatomical structures, maintaining that the same set of analogies pervade all the minor groups: that the *Rasores* are *generation-birds*; the *Natatores*, *muscle-birds*; the *Grallatores*, *bone-birds*; the *Insessores*, *lung-birds*; the *Scansores*, *sense-birds*, and so on. It is needless to follow the author further in these far-fetched and visionary analogies, which are so much more congenial to the German than to the British mind, and which are still better adapted to the astrologers and alchymists of the middle ages, who compiled learned volumes on the mutual analogies and influences between the *seven* metals, the *seven* planets, the *seven* ages of man's life, &c. &c.

The appendix of Dr. Kaup's work is in our opinion the most valuable part of it. Laying aside his mysticism, he gives us some practical and useful remarks on several subjects connected with zoology. In one of these essays he criticises the *natural-history artists* of different countries, pointing out the defects and mannerisms so prominent in the French school, and the merits of Naumann among German, and of Landseer, Bewick and Gould among British artists. We do not however quite agree with Dr. Kaup in his preference of etching (*Radirung*) over lithography for zoological subjects.

Our author next gives directions for preparing plaster-casts of the heads of Mammalia, and especially of the *Quadrumana*. As these animals lose so much of their essential characters by the ordinary mode of preparation, a set of casts taken from them in a recent state would be a valuable addition to our museums. He also recommends naturalists when collecting in foreign countries to use various kinds of traps and nets, as being far more efficacious than the gun, for pro-

curing mammals and birds, especially such species as are wild and shy in their habits.

Another suggestion which seems likely to be of value to the practical zoologist, is that of a solution of arsenic, which Dr. Kaup states to be effectual in preserving mammals and birds from the attacks of every kind of insect. This preparation is made by dissolving in alcohol, of the specific gravity 0·86, as much white arsenic (arsenious acid) as it will take up. The fur of mammals and the plumage of birds (whether mounted or in skins) is to be thoroughly soaked with this solution and then dried. To prevent the plumage from being disarranged by this operation, Dr. Kaup recommends that the specimen should be wrapped in linen cloths, and then wetted with the solution. We are inclined however to think that the mixture might be more easily applied by a flat camel's-hair varnishing brush, the softness of which could do no injury to the specimen. Dr. Kaup assures us that when every part of a specimen has been effectually wetted with this solution, it is guaranteed for ever from the ravages of insects, and that no further precaution against them is necessary. Mr. Waterton some years ago recommended a similar solution of corrosive sublimate in spirit of wine, but we have not found this preparation to be in all cases efficacious, and we are disposed to think that the arsenical solution proposed by Dr. Kaup is far more potent.

Our author further recommends a method of preparing specimens of birds, which would be very advantageous in certain cases. The only parts to be removed are the pectoral and crural muscles, the intestines and the eyes; the whole interior is then to be well-sprinkled with powdered alum and arsenic, and the cavities filled with cotton. When dry, the plumage is to be saturated with the arsenical solution above-mentioned and again thoroughly dried. This method, though somewhat rude, has the advantage of being easily performed by unskilful persons, as well as by the practised naturalist when the saving of time is an object; it retains the proportions and true position of the neck, wings and legs far better than the ordinary mode of preparing skins, and what is of the utmost importance to science, it supplies us with perfect *skeletons* of rare foreign species, which may be easily separated from their integuments if necessary, and placed in the osteological cabinet. We should rejoice therefore to see this method introduced as an adjunct to the usual process of preparing ornithological specimens.

## PROCEEDINGS OF LEARNED SOCIETIES.

### LINNÆAN SOCIETY.

February 4, 1845.—R. Brown, Esq., V.P., in the Chair.

Read the commencement of a paper "On the Nervures of the Wings in Lepidopterous Insects; and on the genus *Argynnis* of the 'Encyclopédie Méthodique.'" By Edward Doubleday, Esq., F.L.S. &c. &c.